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(if the results above given may be accepted) not to be well founded; but I would be among the first to be grateful to him for enunciating it, since it was the means of drawing my attention at once to a line of work which seems likely to bear fruitful results.

And I will venture to add here another word or two of a personal kind. In No. 517 of the *Astronomical Journal* Professor Lewis Boss called attention to the fact that in determining the Cambridge magnitude equation I had treated proper motions as accidental errors, which would disappear in the mean of a number of stars. "Unless this statement is surrounded by several qualifications," wrote Professor Boss, "it is by no means correct," and he went on to specify the qualifications, among which considerations of the Sun's parallactic motion were prominent. Some misunderstandings of what had actually been done in the Oxford work, and, on my part, of what Professor Boss really meant, gave rise to a discussion which turned out to be irrelevant to the real issue (*Astronomical Journal*, Nos. 519, 521, 523). It has been, I hope, satisfactorily closed. But now that I properly understand the real meaning of Professor Boss's remarks with regard to the parallactic motion, it gives me peculiar pleasure to be among the first to confirm their soundness and value in a new way.

A Note relating to the Preservation of Negatives.

By F. A. Bellamy.

Some weeks ago I had occasion to examine a negative of a comet taken in 1899, and upon withdrawing it from its envelope, similar to those used at the University Observatory, Oxford, for storing plates taken for the Astrographic Catalogue, it was immediately noticed by Mr. H. C. Plummer and myself that a representation or impression of the description of the negative written outside the thick envelope had been conveyed to the gelatine film, and almost every letter and figure—though blurred in character, much as a heavily written word would appear on blotting-paper immediately used—could be read *from the plate*. It should be noted that no mark is visible on the *inside* of the envelope to show that the ink had soaked through.

I have since examined a large number of our plates, and I have, I am pleased to state, found very few cases; I may say in general terms that no plate which apparently had a short development and those taken on dark nights—in fact, those that had a bright, clear appearance, and upon which the stars and réseau lines stood in relief; as in the carbon process—showed any sign of this transmitted writing; but the plates that did show it

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were in every case, I believe, rather dense in character, either by a light sky, long development, by light getting to the plate before development, or by the old age of the plate before being exposed, especially those packed with sheets of paper between the plates. The ink used was always Stephen's Blue-black or Draper's Dichroic, and was written usually, if not always, on the envelope before the plate was put in. Some words as to when the plate was measured, or other notes, are added from time to time.

In view of the large quantity of plates that are being used in modern astronomy and stored in envelopes for future use it seems desirable to call astronomers' (and others') attention to this small matter, and to use every precaution to prevent any deterioration of negatives. Damp and an undue amount of sunlight are the greatest enemies to the gelatine film of a negative, but certainly by neither of these causes have our plates suffered at Oxford.

May the cause of this marking, not by bleaching, but by staining, be due to a strong acid or chemical used in the manufacture of the ink, or perhaps that combining with the chloride of lime, from which very little modern paper seems free?

For ordinary negatives the best precaution would undoubtedly be to varnish them, but for negatives required for measurement it is not to be recommended, as there are not many who could frequently flow the varnish over the plate without getting a ridge or overlap of varnish, either of which would tend to distort the image of a star or réseau line.

Nearly twenty years ago (1884 or 1885), some time after I first used the gelatine dry plate instead of the wet collodion process, I well remember spoiling some ordinary negatives by merely packing them for a short time with pieces of printed paper between them, and I could have read most of the printing impressed upon them. I believe I still possess some of these plates. Things of this kind one does naturally by inexperience, especially with a new article—as the commercial dry plate then was—and I have not been entrapped to treat negatives in that way since; but what I have made the subject of this short note is, I believe, new, and one that also requires attention being paid to it.

London: 1902 *Dec.* 12.

Note on Binding together Réseaux and Plates.

By J. A. Hardcastle.

It seems probable that réseaux will have to be laid on to photographic plates constantly in the near future for two sufficient reasons: (1) A réseau much facilitates measuring a

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